

PHS 212 ASSIGNMENT

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BIOMEDICAL ENGINEERING

Write a short note on IMPLANTATION

Implantation is used to describe the process of attachment and invasion of the uterus endometrium by the blastocyst (conceptus) in placental animals. In humans, the process begins at the end of week 1, with most successful human pregnancies the conceptus implants 8 to 10 days after ovulation, the early pregnancy loss increases with later implantation. The implantation process continues through the second week of development.

The initial phase of the implantation process is adplantation. This first phase requires the newly hatched blastocyst to loosely adhere to the endometrial epithelium, often "rolling" to the eventual site of implantation where it is firmly ~~implanted~~ adhered. This process requires both the blastocyst adhesion interaction with the endometrium during the "receptive window".

Subsequent development of the placenta allows maternal support of embryonic and fetal development. If implantation was not proceeded sufficiently during the menstrual cycle to allow hormonal feedback to the ovary, the next cycle may commence leading to conceptus loss.

Abnormal implantation is where this process does not occur in the body of the uterus (ectopic) or where the placenta forms incorrectly. In addition implantation can occur normally but with an abnormal conceptus, as in a hydatiform mole development.